

AMENDMENTS TO THE CLAIMS

4. (Currently Amended) A method for inspecting channel pipes, wherein [hermispherical] hemispherical or fully spherical digital images recorded at specific locations in the pipe are calculated and perspective images enabling virtual swiveling are produced, the method comprising:

taking a given known pipe geometry of an imaged pipe,  
[from] an intermediate image [data at one location;] is  
calculated and represented from [calculating and  
representing an] the intermediate image [for a random  
neighboring] data taken at one location for a random  
neighboring location of a desired fictive camera position;  
projecting a recorded image computationally onto the  
known pipe geometry; and  
calculating a one-point perspective image data  
resulting therefrom for [a] the neighboring location.

5. (Original) The method according to Claim 4, wherein calculating at each image point of a 2D-fisheye image  $P'$  ( $X_f$ ,  $Y_f$ ) with known imaging function, the angle of incidence ( $\alpha$ ,  $\theta$ ) of the spherical coordinates, and from the calculation a corresponding image point in 3D space  $P$  ( $X_r$ ,  $Y_r$ ,  $Z_r$ ) on the pipe surface is represented.

6. (Original) The method according to Claim 4, wherein calculating from the desired fictive camera position and its viewing angle in space, an image point located in a desired section of an image plane, and taking from image point coordinates  $(X_b, Y_b)$  of the image plane and assuming a projection center at a distance  $F$  from the image plane  $B$ , calculating corresponding image point coordinates  $(X_r, Y_r, Z_r)$  on the inner surface of the known pipe geometry and corresponding image point coordinates  $(X_f, Y_f)$  of a fisheye image, so that the color and brightness value of an image point on image plane  $B$  with  $P''(X_b, Y_b) = P(X_f, Y_f)$  is obtained.